

Listing of the Claims:

Claim 1. (Currently Amended): A multiple view angles camera, comprising:
a single image sensor for outputting an image projected by a lens as an image signal;
a more than one narrow view angle lens for projecting an image of a narrow view angle photograph range on a narrow view angle image region of said single image sensor;
and
a wide view angle lens for projecting an image of a wide view angle photograph range on a wide view angle image region of said single image sensor.

Claim 2. (Currently Amended): A multiple view angles camera according to claim 1, wherein said wide view angle lens is provided in front of said more than one narrow view angle lens and is a cylinder lens for projecting an image of the wide view angle photograph range on the wide view angle image region on the image sensor by way of the lens and said narrow view angle lens.

Claim 3 (Canceled).

Claim 4 (Previously Presented): An automatic photographing apparatus, comprising:
a multiple view angles camera for projecting an image of a wide view angle photograph range and images of more than one narrow view angle photograph ranges on

a wide view angle image region and more than one narrow view angle image regions of one image sensor at the same time, and for outputting the images as an image signal;

a pan-tilt mechanism for changing a photographing direction of said multiple view angles camera; and

a photograph direction control means for defining the photographing direction to photograph more than one specific portions of a specific subject with the more than one narrow view angle photograph ranges based on the image of the specific subject in the wide view angle photograph range of said multiple view angles camera, and for controlling said pan-tilt mechanism based on the photographing direction.

Claim 5. ((Previously Presented)): An automatic photographing apparatus, comprising:

a multiple view angles camera, for projecting an image of a wide view angle photograph range and images of more than one narrow view angle photograph ranges on a wide view angle image region and more than one narrow view angle image regions on one image sensor at the same time, which is structured with each directions of more than one narrow view angle photograph ranges to be changeable;

a pan-tilt mechanism for changing a photographing direction of said multiple view angles camera;

a photograph direction control means for defining a photographing direction to photograph more than one specific portion of a specific subject with more than one narrow view angle photograph ranges based on the image of the specific subject in the

wide view angle photograph range of said multiple view angles camera, and for controlling said pan-tilt mechanism based on the photographing direction; and

a photograph region angle control means for controlling respective directions of more than one narrow view angle photograph range of said multiple view angles camera based on a relationship between positions of more than one specific portions of the specific subject.

Claim 6. (Currently Amended): An automatic photographing apparatus according to claim 3, comprising:

a multiple view angles camera for projecting an image of a wide view angle photograph range and an image of a narrow view angle photograph range on a wide view angle image region and a narrow view angle image region of one image sensor at the same time, and for outputting the images as an image signal;

a pan-tilt mechanism for changing a photographing direction of said multiple view angles camera;

a photograph direction control means for defining the photographing direction to photograph a specific portion of a specific subject with the narrow view angle photograph range based on the image of the specific subject in the wide view angle photograph range of said multiple view angles camera, and for controlling said pan-tilt mechanism based on the photographing direction; and

an image sensor read-out control means for, when said photograph direction control means performs a process for defining a photographing direction of said multiple view angles camera to photograph a specific portion of a subject with a narrow view

angle photograph range, reading out an image signal of a wide view angle image region from the image sensor and giving it to said photograph direction control means, and when the specific portion's image is used by later process after said photograph direction control means controlled the photographing direction, reading out an image signal of a narrow view angle image region from the image sensor.

Claim 7. (Original) An automatic photographing apparatus according to claim 4, comprising:

an image sensor reading-out control means for, when said photograph direction control means performs a process for defining a photographing direction of said multiple view angles camera to photograph more than one specific portions of the subject with more than one narrow view angle photograph ranges, reading out the image signal of the wide view angle image region from the image sensor and giving it to said photograph direction control means, and when the specific portion's images are used by later process after said photograph direction control means controlled the photographing direction, reading out the image signal of the set of the narrow view angle image regions from the image sensor.

Claim 8 (Previously Presented): An automatic photographing apparatus according to claim 5, comprising:

an image sensor reading-out control means for, when said photograph direction control means performs a process for defining a photographing direction of said multiple view angles camera to photograph more than one specific portions of the subject with

more than one narrow view angle photograph range, reading out the image signal of the wide view angle image region from the image sensor and giving it to said photograph direction control means, and when the specific portion's images are used by later process after said photograph direction control means controlled the photographing direction, reading out the image signal of the set of the narrow view angle image regions from the image sensor.

Claim 9. (Currently Amended): An iris recognition method, wherein iris recognition is performed using an automatic photographing apparatus including a multiple view angles camera for photographing an image of a wide view angle photograph range and an image of a more than one narrow view angle photograph range in a wide view angle image region and a more than one narrow view angle image region of one image sensor at the same time, and for outputting the images as an image signal; a pan-tilt mechanism for changing a photographing direction of said multiple view angles camera; and a photograph direction control means for defining the photographing direction to photograph a specific portion of a specific subject with the more than one narrow view angle photograph range based on the image of the specific subject in the wide view angle photograph range of said multiple view angles camera, and for controlling said pan-tilt mechanism based on the photographing direction, comprising the steps of:

estimating an eye position of a subject from the image of the wide view angle image region of the image sensor;

controlling a photographing direction of said multiple view angles camera so that the more than one narrow view angle photograph range of said multiple view angles camera is to become at an eye position of the subject;

obtaining an eye image based on the image of the narrow view angle image region projected on the image sensor;

defining an iris region from the eye image thus obtained; and

identifying whether or not a subject is the person himself based on said iris image information thus defined and iris image information being registered in advance.